THE CLAIMS

1.(original) A magnetic recording medium for communication with a transducer moving relative to the recording medium along a line of relative transducer motion, comprising:

a substrate having a substrate surface;

a seed layer disposed on the substrate surface;

a soft magnetic underlayer disposed on the seed layer, the soft magnetic underlayer comprising a magnetic material having a magnetic moment larger than 1.7 Teslas, the soft magnetic underlayer having a texture that provides a magnetic easy axis that has an easy axis alignment parallel to the line of relative transducer motion; and

a magnetic storage layer disposed on the soft magnetic underlayer.

2. (original) The magnetic recording medium of Claim 1 further comprising a second seed layer deposited on the soft magnetic underlayer, and a second soft magnetic underlayer deposited on the second seed layer, forming a multilayer laminated soft magnetic underlayer structure.

3. (original) The magnetic recording medium of Claim 1 wherein the recording medium comprises a disc, and the easy axis alignment is circumferential.

4. (original) The magnetic recording medium of Claim 1 wherein the recording medium comprises a drum, and the line of relative transducer motion and the easy axis alignment are circumferential.

5. (original) The magnetic recording medium of Claim 1 wherein the recording medium comprises a plate.

6. (original) The magnetic recording medium of Claim 1 wherein the soft magnetic underlayer is free of 90° and 180° domain walls.

7. (original) The magnetic recording medium of Claim 1 wherein the texturing maintains the easy axis alignment in the presence of an externally applied field.

8. (original) The magnetic recording medium of Claim 1 wherein the texture provides a magnetic hard axis that has a hard axis alignment that is to the line of relative transducer motion.

9. (original) The magnetic recording medium of Claim 1 wherein the seed layer comprises copper and has a concentrically textured seed layer surface that induces the texture of the soft magnetic underlayer.

10. (original) The magnetic recording medium of Claim 1 wherein the seed layer comprises a seed layer material selected to reduce coercivity H_C in the soft magnetic underlayer, the seed layer material being selected from the group: copper, ruthenium, permalloy, copper/iridium-manganese, and tantalum/copper.

11. (original) The magnetic recording medium of Claim 10 wherein an external magnetic field establishes the texture of the soft magnetic underlayer.

12. (original) The magnetic recording medium of Claim 1 wherein the magnetic material has a magnetic moment that is at least 2.0 teslas.

13. (original) The magnetic recording medium of Claim 1 wherein the magnetic material comprises Iron and Cobalt.

14. (original) The magnetic recording medium of Claim 13 wherein the magnetic material comprises about 65 at% Iron and 35 at% Cobalt.

15. (original) The magnetic recording medium of Claim 1 wherein the seed layer and the soft magnetic underlayer form a seeded double layer structure, and the seed layer has a thickness of about 5 nanometers and the soft magnetic underlayer has a thickness of about 50 nanometers.

16. (original) The magnetic recording medium of Claim 1 wherein the seed layer and the soft magnetic underlayer form a seeded double layer structure, and the seed layer has a thickness of about 5 nanometers and the soft magnetic underlayer has a laminated structure of about 50 nanometers thick soft magnetic films separated with non-magnetic spacers.

17. (original) The magnetic recording medium of Claim 1 wherein the seed layer and the soft magnetic underlayer form a seeded double layer structure, the soft magnetic underlayer is biased by an anti-ferromagnetic layer selected from the group of ruthenium and iridium-manganese.

18. (original) A method of manufacturing a magnetic recording medium for communication with a transducer moving relative to the recording medium along a line of relative transducer motion, comprising:

providing a substrate having a substrate surface;

depositing a seed layer on the substrate surface;

depositing a soft magnetic underlayer on the seed layer, the soft magnetic underlayer comprising a magnetic material having a magnetic moment larger than 1.7 teslas, the soft magnetic underlayer having a texture that provides a magnetic easy axis that has an easy axis alignment parallel to the line of relative transducer motion; and

depositing a magnetic storage layer on the soft magnetic underlayer.

19. (original) The method of Claim 18 further comprising shaping the substrate into a disc aligning the easy axis in a circumferential direction on the disc.

20. (original) The method of Claim 18 further comprising shaping the substrate into a drum, and aligning the easy axis in a circumferential direction on the drum.

21. (original) The method of Claim 18 further comprising shaping the substrate into a plate.

22. (original) The method of Claim 18 further comprising forming the seed layer from copper and aligning a seed layer texture with the line of relative transducer motion.

23. (original) The method of Claim 18 further comprising selecting a seed layer material from the group: ruthenium, permalloy and tantalum-copper to reduce coercivity H_c in the soft magnetic underlayer.

24. (original) The method of Claim 23 further comprising applying an external magnetic field to establishes the texture of the soft magnetic underlayer.

25. (original) The method of Claim 18 further comprising selecting the magnetic material to have a magnetic moment that is at least 2.0 teslas.

26. (original) The method of Claim 18 further comprising selecting the magnetic material to comprise Iron and Cobalt.

27. (original) The method of Claim 18 wherein the magnetic material comprises about 65 at% Iron and 35 at% Cobalt.

28. (original) The method of Claim 18 wherein the seed layer and the soft magnetic underlayer form a seeded double layer structure, and the seed layer has a thickness of about 5 nanometers and the soft magnetic underlayer has a thickness of about 50 nanometers.

29.(withdrawn) A magnetic recording medium for communication with a transducer moving relative to the recording medium along a line of relative transducer motion, comprising:

a substrate, a seed layer disposed on the substrate; a soft magnetic underlayer disposed on the seed layer, the soft magnetic underlayer comprising a magnetic material having a magnetic moment larger than 1.7 teslas, and a magnetic storage layer disposed on the soft magnetic underlayer; and

means for texturing the soft magnetic underlayer to provide a magnetic easy axis that has an easy axis alignment parallel to the line of relative transducer motion.

30. (withdrawn) The magnetic recording medium of Claim 29 wherein the recording medium comprises a disc, and the easy axis alignment is circumferential.

31. (withdrawn) The magnetic recording medium of Claim 29 wherein the seed layer comprises copper and has a concentrically textured seed layer surface that induces the texture of the soft magnetic underlayer.

32. (withdrawn) The magnetic recording medium of Claim 29 wherein the magnetic material has a magnetic moment that is at least 2.0 teslas.

33. (withdrawn) The magnetic recording medium of Claim 29 wherein the magnetic material comprises Iron and Cobalt.